

Having thus described the invention, what is claimed is:

1 1. A theft-deterrent device for a vehicle, comprising:
2 a receiver for receiving at least one lock position signal from a remote
3 operation device;
4 a processor for determining whether or not an ID included in the lock position
5 matches a stored ID;
6 a primary lock mechanism for responding to the lock position signal when the
7 IDs match to lock or unlock the vehicle;
8 an actuator for driving the primary lock mechanism, and
9 a theft-detection unit detecting movement and for generating an alarm signal
10 when the vehicle is moved when the receiver has not received an unlocking signal
11 including an ID matching the stored ID;
12 wherein the receiver, processor, primary lock mechanism, actuator and theft-
13 detection unit are comprised in a module within a single housing.

1 2. The theft-deterrent device of claim 1, wherein the primary lock
2 mechanism is engageable with a rotating shaft of a handlebar to lock a vehicle, and
3 wherein the module is situated near the rotating shaft of the handlebar.

1 3. The theft-deterrent device of claim 1, wherein the theft-detection unit
2 comprises a vibration sensor, and is configured to detect when the vehicle is moved

3 without a required operation having been performed, and to generate a theft-detection
4 signal in response to such movement.

1 4. The theft-deterrent device of claim 1, wherein the
2 theft-detection unit comprises a steering angle sensor and is configured to detect when a
3 handlebar steering angle has been changed by a predetermined amount without a required
4 operation having been performed, and to generate a theft-detection signal in response to
5 such change in the steering angle.

1 5. The theft-deterrent device of claim 1, further
2 comprising an alarm buzzer which is capable of being energized in response to the theft-
3 detection signal.

1 6. The theft-deterrent device of claim 5, wherein the alarm buzzer is
2 separate from a vehicle horn, and is included within said module.

1 7. The theft-deterrent device of claim 1, further comprising a seat lock, wherein
2 the seat lock is locked and unlocked in coordination with locking and unlocking of said
3 primary lock mechanism.

1 8. A theft-deterrent device for a vehicle, comprising:
2 a receiver for receiving at least one lock position signal from a remote
3 operation device;

4 a processor for determining whether or not an ID included in the lock position
5 matches a stored ID;
6 a lock mechanism for responding to the lock position signal when the IDs
7 match to lock or unlock the vehicle;
8 an actuator for driving the lock mechanism, and
9 a theft-detection unit detecting movement and for generating an alarm signal
10 when the vehicle is moved when the receiver has not received an unlocking signal
11 including an ID matching the stored ID;
12 wherein the receiver, processor, lock mechanism, actuator and theft-detection unit
13 are comprised in a module within a single housing;
14 and further wherein the primary lock mechanism is engageable with a rotating shaft
15 of a handlebar to lock a vehicle, and the module is situated near the rotating shaft of
16 the handlebar.

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1 9. The theft-deterrent device of claim 8, wherein the theft-detection unit comprises a
2 vibration sensor, and is configured to detect when the vehicle is moved without a
3 required operation having been performed, and to generate a theft-detection signal in
4 response to such movement.

1 10. The theft-deterrent device of claim 8, wherein the theft-detection unit
2 comprises a steering angle sensor and is configured to detect when a handlebar steering
3 angle has been changed by a predetermined amount without a required operation having

4 been performed, and to generate a theft-detection signal in response to such change in the
5 steering angle.

1 11. The theft-deterrent device of claim 8, further
2 comprising an alarm buzzer which is capable of being energized in response to the theft-
3 detection signal.

1 12. The theft-deterrent device of claim 11, wherein the alarm buzzer is
2 separate from a vehicle horn, and is included within said module.

1 13. The theft-deterrent device of claim 8, further comprising a seat lock, wherein the
2 seat lock is locked and unlocked in coordination with locking and unlocking of said
3 primary lock mechanism.

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1 14. A theft-deterrent device for a vehicle, comprising:
2 a receiver for receiving at least one lock position signal from a remote
3 operation device;
4 a processor for determining whether or not an ID included in the lock position
5 matches a stored ID;
6 a primary lock mechanism for responding to the lock position signal when the
7 IDs match to lock or unlock the vehicle;
8 an actuator for driving the lock mechanism, and

9 a theft-detection unit detecting movement and for generating an alarm
10 signal when the vehicle is moved when the receiver has not received an unlocking
11 signal including an ID matching the stored ID, said theft-detection unit
12 comprising a vibration sensor and being configured to detect when the vehicle is
13 moved without a required operation having been performed, and to generate a
14 theft-detection signal in response to such movement;
15 wherein the receiver, processor, primary lock mechanism, actuator and theft-
16 detection unit are comprised in a module within a single housing.

1 15. The theft-deterrent device of claim 14, further
2 comprising an alarm buzzer which is capable of being energized in response to the theft-
3 detection signal.

1 16. The theft-deterrent device of claim 15, wherein the alarm buzzer is
2 separate from a vehicle horn, and is included within said module.

1 17. The theft-deterrent device of claim 1, further comprising a seat lock, wherein
2 the seat lock is locked and unlocked in coordination with locking and unlocking of
3 said primary lock mechanism.

1 18. A theft-deterrent device for a vehicle, comprising:
2 a receiver for receiving at least one lock position signal from a remote
3 operation device;

4 a processor for determining whether or not an ID included in the lock position
5 matches a stored ID;
6 a primary lock mechanism for responding to the lock position signal when the
7 IDs match to lock or unlock the vehicle;
8 an actuator for driving the lock mechanism, and
9 a theft-detection unit detecting movement and for generating an alarm
10 signal when the vehicle is moved when the receiver has not received an unlocking
11 signal including an ID matching the stored ID, said theft-detection unit
12 comprising a steering angle sensor and being configured to detect when a
13 handlebar steering angle has been changed by a predetermined amount without a
14 required operation having been performed, and to generate a theft-detection signal
15 in response to such change in the steering angle;
16 wherein the receiver, processor, primary lock mechanism, actuator and theft-
17 detection unit are comprised in a module within a single housing.

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1 19. The theft-deterrent device of claim 18, further
2 comprising an alarm buzzer which is capable of being energized in response to the theft-
3 detection signal.

1 20. The theft-deterrent device of claim 19, wherein the alarm buzzer is
2 separate from a vehicle horn, and is included within said module.

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